

REMARKS

Claims 1-17 continue to be the pending claims in the application. Reconsideration of the application in light of the remarks which follow is respectfully requested.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 1-7, 12 and 14-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Horner Jr. et al. (U.S. Patent No. 6,365,533) in view of Fidler et al. (U.S. Patent No. 6,136,216) and Dimakis (U.S. Patent No. 5,345,738). The Examiner contends that Horner Jr. et al. disclose a pliable facer comprising a preformed glass mat, a binder and a coating comprising fillers, surfactant and flame retarding additives. The Examiner alleges that because Horner Jr. et al. includes surfactant, it necessarily includes surfactant-generated microcells. The Examiner also contends that Fidler et al. disclose insulative compositions that can be made in sheets or loose fill which comprise fiberglass, acrylic latex binder, a surfactant such as lauryl sulfate and a clay filler and a gelatin cross-linker, which the Examiner equates with a gel catalyst. The Examiner further contends that Dimakis teaches a metallic foil that can be adhered to a fibrous sheet comprising a core. The Examiner therefore concludes that the combination of Horner Jr. et al., Fidler et al. and Dimakis renders the claims 1-7, 12 and 14-17 obvious.

Further, claims 8-11 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Horner Jr. et al. (U.S. Patent No. 6,365,533), Fidler et al. (U.S. Patent No. 6,136,216) and Dimakis (U.S. Patent No. 5,345,738) and further in view of Ahluwalia (U.S. Patent No. 5,965,257). The Examiner contends that Horner Jr. et al., Fidler et al. and Dimakis disclose the claimed invention except for the teaching that the composite further requires water repellant material, antifungal material, antifungal material, antibacterial material, a surface friction agent, and an algicide. The Examiner contends that Ahluwalia discloses coated structural articles comprising a glass fiber substrate wherein the coating consists of a latex and a filler and wherein the structural article may be coated with a water repellant material, an

antifungal material, an antibacterial material, a surface friction agent, and an algacide. The Examiner therefore concludes that the combination of Horner Jr. et al., Fidler et al., Dimakis and Ahluwalia renders the claims 8-11 and 13 obvious.

The Claimed Invention

Claim 1 relates to a composite material comprising a first layer which comprises a surfactant component, surfactant-generated microcells, a gel catalyst component and a binder component and a second layer comprising a metallic component adhered to the first layer. Claim 2 covers a composite material comprising a substrate, a first layer adhered to the substrate to provide a coated substrate, and a second layer, adhered to the coated substrate wherein the first layer comprises a surfactant component, surfactant-generated microcells, a gel catalyst component and a binder component, and wherein the second layer comprises a metallic component. Claims 3-17 are dependent on claim 2 or claims 1 or 2 or claims dependent thereon.

The Prior Art

Horner Jr. et al. disclose a facer member for use in the construction industry comprising a preformed fiber mat substrate coated with a prefoamed, self-sustaining foam mixture. The facer material disclosed by Horner Jr. et al. can be used to manufacture insulation boards comprising thermosetting or thermoplastic foam cores disposed between a pair of facer materials laminated to the foam core surfaces. *See* Horner Jr. et al. col. 5, lines 34-39. Horner Jr. et al. teach that the facer material insulation boards have tolerance to weathering and that they are superior and have broader application than other insulation boards, such as being useful as non-foil, non-glare sheathings. *See* Horner Jr. et al. col. 7, lines 9-12. This is consistent with Horner Jr. et al.'s description of the prior art in which foil was used which Horner Jr. et al. describe as "leading to disruption of cell structure, delamination and warping" and as costly and thus not

desirable. See Horner Jr. et al. col 2, lines 20-24.

Fidler et al. teaches an insulative composition comprising an aqueous gelatin solution and an aerogel, wherein said composition may further comprise a dye, a surfactant, a fungicide and/or pesticide, a gelatin crosslinker, a binder, an opacifier, and a fiber component. The gelatin crosslinker crosslinks the aqueous gelatin.

Dimakis teaches an insulation panel comprising an insulating core, sandwiched between cover sheets. See Dimakis col. 2, lines 1-14. Sheets of foil may be provided between the core and the cover sheets to block the exchange of a blowing agent in the core and air. See Dimakis col. 2, 36-40, and Figs. 1 and 2.

Ahluwalia teaches a structural article comprising a substrate having an ionic charge coated with a coating having essentially the same ionic charge wherein said coating consists essentially of a filler material and a binder material and wherein said binder material bonds the filler material together and to the substrate and wherein said coatings does not bleed through said substrate. The structural article may further be coated with a water repellent material, an antifungal material, an antibacterial material, a surface friction agent, or an algacide.

There is No *Prima Facie* Case of Obviousness

The combination of Horner Jr. et al., Fidler et al. and Dimakis does not support a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the combined references must teach or suggest all the claimed limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and must not be based on the Applicants disclosure.

In re Vaeck, 947 F.2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991); MPEP § 2142.

In this case, there is no suggestion or motivation in any of the cited references to alter Horner Jr. et al. to produce a composite material according to the present claims. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *See In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Horner Jr. et al. teaches prefoamed coatings comprising a thixotropic polymer latex, a surfactant and an inorganic filler. These self-sustaining foamed coatings can be applied to a fibrous mat to produce facer members that are used to manufacture an insulation board comprising a traditional thermoplastic insulating foam core having facer members on both sides. Fidler et al. teach an insulative composition comprising an aqueous mixture of aerogel and gelatin, and may further comprise a gelatin crosslinker. *See* Fidler et al. col. 4, lines 49-57. The gelatin crosslinker may be included to crosslink the proteinaceous gelatin foam formed from the mixture of gelatin and aerogel. *See* Fidler et al. col. 6, lines 23-25. Horner Jr. et al. do not include any sort of aerogel or gelatin. Therefore, the skilled artisan looking to Horner Jr. et al. and Fidler et al. would not be motivated to include a gelatin crosslinker to a composition that does not include gelatin. And Dimakis does not provide this teaching. Accordingly, there is no motivation to combine Horner Jr. et al. and Fidler et al. to obtain the present invention.

Applicants also assert that the gelatin crosslinker of Fidler et al. is not the same as the gel catalyst component of the present invention. The Examiner equates the gelatin crosslinker of Fidler et al. to the gel catalyst component of the present invention. As mentioned above, Fidler et al. teach that the gelatin crosslinker crosslinks the proteinaceous gelatin foam. Accordingly, a gel exists in Fidler et al. in the absence of the gelatin crosslinker and the gelatin crosslinker merely crosslinks the gel. In contrast, the present specification teaches a gel catalyst component that catalyzes gel formation. *See* Specification page 10, paragraph 30. The meaning

of words used in a claim is not construed in a lexicographic vacuum, but in the context of the specification and drawings. *See Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 53 USPQ2d 1065 (Fed. Cir. 1999). Accordingly, Applicants respectfully disagree with Examiner's equation of the gelatin crosslinker of Fidler et al. and the gel catalyst in the present invention. There is no teaching or suggestion anywhere in Fidler et al., Horner Jr. et al. or Dimakis of a gel catalyst that is capable of catalyzing gel formation. In order for the Examiner to make out *prima facie* case of obviousness, the combined references must teach or suggest all the claimed limitations which the combined teachings of Fidler et al., Horner Jr. et al. and Dimakis fail to do.

In addition, Dimakis teaches a panel having an insulating core sandwiched between cover sheets. Metallic foil may be used to block the exchange of the blowing agent and air. Such foil "may be and preferably is" interposed between the core and cover sheets. *See* Dimakis col. 5, lines 54-56 and Figs. 1 and 2. The metallic foil can be adhered to either or both sides of the core. *See* Dimakis col. 5, lines 60-61. In contrast, the presently claimed composite material comprises a metallic component adhered to the coated substrate. The combination of Horner Jr. et al., Fidler et al., and Dimakis would, at best, suggest to a skilled artisan to make an insulation panel comprising a core, layered with a metallic foil, such layered core further comprising a cover sheet which comprises a substrate and a coating. As noted above, the skilled artisan would not be motivated to include the gelatin crosslinker of Fidler et al. in the prefoamed coating of Horner Jr. et al. And even if this combination is suggested, the gelatin crosslinker of Fidler et al. cannot be equated with the gel catalyst of the present invention. Moreover, Horner Jr. et al. teach away from the combination with Dimakis and from the present invention. Horner Jr. et al. teach that aluminum facers are not desired because they cause disruption, delamination and warping and because they are costly. *See* Horner Jr. et al. col. 2, lines 20-24. The use of aluminum facers as taught by Horner Jr. et al. is also undesirable because such facers hold and reflect heat and often cause warping and deterioration of wood overlayment. *See* Horner Jr. et al.

col. 5, lines 50-55. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. MPEP § 2141.02 (citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984))(emphasis in original). It is not appropriate to choose only the desired teaching and not that which teaches away. The skilled artisan looking to Horner Jr. et al. would not be motivated to combine it with the foil of Dimakis because Horner Jr. et al. teach that a foil facer is not desirable. Nor would the skilled artisan be motivated to combine Fidler et al. and Horner Jr. et al. as discussed *supra*, because there would be no motivation to incorporate a gelatin crosslinker which crosslink proteinaceous gelatin foam into a composition in which proteinaceous gelatin foam is not present. Accordingly, the skilled artisan would not be motivated to combine any of the cited references to obtain the claimed invention.

Moreover, Ahluwalia does not provide the teaching necessary to make up for the deficiencies of Horner Jr. et al., Fidler et al. and Dimakis.

As noted above, in order for the Examiner to make out a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference or to combine reference teachings, which, in this case, do not exist.

Accordingly, Applicants respectfully request withdrawal of the of the claims under 35 U.S.C. §103(a) as obvious over Horner Jr. et al. in view of Fidler et al. and Dimakis.

Conclusion

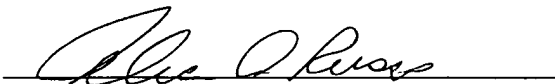
In view of the foregoing remarks, Applicants submit that the present invention is now in condition for allowance. Accordingly, favorable reconsideration of the application is earnestly solicited. Please send any further correspondence relating to this application to the undersigned attorney at the address below.

Applicants believe no fee is due in connection with this communication. However, should any fee be due in connection with this communication, the Commissioner is

authorized to charge any such fee to Deposit Account No. 06-1205.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "John D. Murnane", is written over a horizontal line.

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